

# Science Toolkit: Grade 8 Objective 1.A.1.g

Student Handout: Science: Grade 8 Objective 1.A.1.g

Standard 1.0 Skills and Processes

Topic A. Constructing Knowledge

Indicator 1. Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.

Objective g. Give reasons for the importance of waiting until an investigation has been repeated many times before accepting the results as correct.

Selected Response (SR) Item

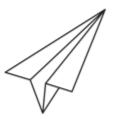
Question

Use the information below to answer the following.

Students investigated how the design of a paper airplane affects the amount of time the airplane stays in the air and the distance the airplane travels. The students tested two airplane designs and kept all other variables constant. The students recorded their data in the tables below.

AIRPLANE Y





Long and Narrow



Short and Wide

## DISTANCE AIRPLANES TRAVELED

Airplane	Trial 1	Trial 2	Trial 3
Υ	600	550	800
	centimeters	centimeters	centimeters
Z	150	175	105
	centimeters	centimeters	centimeters

#### TIME AIRPLANES WERE IN THE AIR

Airplane	Trial 1	Trial 2	Trial 3
Υ	3 seconds	2 seconds	4 seconds
Z	2 seconds	7 seconds	6 seconds

After Trial 1, a group of students decided that Airplane Y would travel farther and stay in the air a greater amount of time than Airplane Z.

Which is the <u>best</u> scientific reason the students should repeat the trial at least three times?

- A. to follow the teacher's instructions
- B. to reduce the likelihood of a design defect
- C. to change the unit of measurement for distanceD. to reduce the likelihood of inaccurate results

## Correct Answer

D. to reduce the likelihood of inaccurate results

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